L Number	Hits	Search Text	DB	Time stamp
1	51	Sung NEAR Young	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/08/08 10:39
2	1	(Sung NEAR Young) and SIV	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/08/08 10:39
3	4	Sung NEAR Young NEAR Chul	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/08/08 10:38
4	1	Suh NEAR You NEAR Suk	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/08/08 10:39
5	307	SIV WITH (gag dpol env rev)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/08/08 10:59
6	58	(SIV WITH (gag dpol env rev)) and ((dele$ OR lack$) WITH (vpr tat nef))	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/08/08 10:58
8	1259	simian NEAR immunodeficiency NEAR virus	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/08/08 10:59
9	292	(simian NEAR immunodeficiency NEAR virus) SAME (gag dpol env rev vpr tat nef)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/08/08 11:00
10	267	((simian NEAR immunodeficiency NEAR virus) SAME (gag dpol env rev vpr tat nef)) and (dele$ lack$ mutat$)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/08/08 11:01
11	70	((simian NEAR immunodeficiency NEAR virus) SAME (gag dpol env rev vpr tat nef)) SAME (dele$ lack$ mutat$)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/08/08 11:10
12	1	pTV-SIV$	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/08/08 11:11
37	21	(US-6555342-$ or US-6531123-$ or US-6479281-$ or US-6365150-$ or US-6326007-$ or US-6319666-$ or US-5851813-$ or US-6001985-$ or US-6207455-$ or US-6521739-$ or US-6534312-$).did. or (US-20030091585-$ or US-20010004531-$ or US-20030134817-$ or US-20030049229-$ or US-20020123471-$ or US-20020034502-$ or US-20010036655-$).did. or (WO-200018430-$ or WO-200192506-$ or WO-9504546-$).did.	USPAT; US-PGPUB; DERWENT	2003/08/08 11:25

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     (FILE 'HOME' ENTERED AT 11:47:10 ON 08 AUG 2003)

     FILE 'MEDLINE, AGRICOLA, CANCERLIT, SCISEARCH, CAPLUS, MEDICONF' ENTERED
     AT 11:48:20 ON 08 AUG 2003
L1        12313 S SIV OR (SIMIAN IMMUNODEFICIENCY VIRUS)
L2         4405 S L1 AND (GAG OR DPOL OR ENV OR REV OR VPR OR TAT OR NEF)
L3         1425 S L2 AND (DELE? OR MUTAT? OR LACK?)
L4          652 DUP REM L3 (773 DUPLICATES REMOVED)
L5            2 S L4 AND PTV?
L6          495 S L4 AND PY<=2000
L7          495 FOCUS L6 1-
                E SUNG YOUNG?/AU
                E CHUL-SUNG YOUNG?/AU
L8           12 S L6 AND (VPR(L)TAT(L)NEF)
L9          420 S SIV(L)POL
L10          50 S L9 AND REVERSE?
L11          32 DUP REM L10 (18 DUPLICATES REMOVED)
L12          32 SORT L11 PY

     FILE 'STNGUIDE' ENTERED AT 12:19:00 ON 08 AUG 2003

     FILE 'MEDLINE, AGRICOLA, CANCERLIT, SCISEARCH, CAPLUS, MEDICONF' ENTERED
     AT 12:20:03 ON 08 AUG 2003
L13          32 FOCUS L12 1-

=> d l13 3 all

L13  ANSWER 3 OF 32  CAPLUS  COPYRIGHT 2003 ACS on STN
AN   2001:453475  CAPLUS
DN   135:45187
TI   DNA vaccine that prevents simian immunodeficiency virus infection in
     monkeys
IN   Sung, Young Chul; Suh, You Suk
PA   Geneccin Co. Ltd., S. Korea
SO   U.S. Pat. Appl. Publ., 18 pp.
     CODEN: USXXCO
DT   Patent
LA   English
IC   ICM  A61K031-70
     ICS  A01N043-04
NCL  435320100
CC   15-2 (Immunochemistry)
FAN.CNT 1
     PATENT NO.        KIND  DATE           APPLICATION NO.  DATE
     ---------------   ----  --------       ---------------  --------
PI   US 2001004531      A1   20010621       US 2000-730716   20001206
PRAI KR 1999-55129      A    19991206
AB   The authors disclose plasmids carrying simian immunodeficiency virus (
     SIV)-derived genes.  Immunization of rhesus monkeys with the
     plasmid pSIV/GE which carries gag, protease, env and rev genes, but not
     tat and nef genes, and with the plasmid pSIV/pol which carries
     SIV-derived pol gene induced a protective response
     against subsequent SIVmac 239 challenge.
ST   DNA vaccine immunodeficiency virus
IT   Vaccines
        (AIDS; plasmid vectors expressing immunodeficiency virus genes)
IT   Human immunodeficiency virus
     Simian immunodeficiency virus
        (DNA immunization with plasmid vectors expressing genes of)
IT   Gene, microbial
     RL: BAC (Biological activity or effector, except adverse); BSU (Biological
     study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES
     (Uses)
        (env; DNA immunization against immunodeficiency virus with plasmid
        vectors encoding)
IT   Plasmid vectors
        (for expression of immunodeficiency virus genes in DNA immunization)
IT   Glycoproteins, specific or class
     RL: BSU (Biological study, unclassified); BIOL (Biological study)
```

(gD; plasmid vector expressing immunodeficiency virus pol gene products fused to signal peptide of)

IT Gene, microbial
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(gag; DNA immunization against immunodeficiency virus with plasmid vectors encoding)

IT Immunization
(genetic; with plasmid vectors expressing immunodeficiency virus genes)

IT Human herpesvirus
(plasmid vector expressing immunodeficiency virus pol gene products fused to signal peptide of glycoprotein D of)

IT Macaca mulatta
(plasmid vectors expressing simian immunodeficiency virus genes for DNA immunization of)

IT Gene, microbial
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(pol; DNA immunization against immunodeficiency virus with plasmid vectors encoding mutation of)

IT Gene, microbial
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(rev; DNA immunization against immunodeficiency virus with plasmid vectors encoding)

IT Anti-AIDS agents
(vaccines; plasmid vectors expressing immunodeficiency virus genes)

IT 9068-38-6, **Reverse** transcriptase
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(DNA immunization against immunodeficiency virus with plasmid vectors encoding)

IT 52350-85-3, Integrase
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(DNA immunization against immunodeficiency virus with plasmid vectors encoding mutation of)

L12 ANSWER 6 OF 32 MEDLINE on STN
AN 91049463 MEDLINE
TI Expression of enzymatically active **reverse** transcriptase of simian immunodeficiency virus in bacteria: sensitivity to nucleotide analogue inhibitors.
SO VIROLOGY, (1990 Dec) 179 (2) 896-900.
Journal code: 0110674. ISSN: 0042-6822.
AU Prasad V R; Myrick K; Haseltine W; Goff S P
AB A fragment of the SIVmac251 **pol** gene was expressed in Escherichia coli as a trpE fusion protein. Analysis of extracts from bacteria containing this expression plasmid revealed the presence of a **reverse** transcriptase activity dependent on Mg2+ as divalent cation and active on both poly(rA).oligo(dT) and poly(rC.oligo(dG) templates. In comparative studies, the **SIV** and HIV-1 **reverse** transcriptases expressed in bacteria displayed very similar high sensitivities to the chain terminator inhibitors AZTTP and ddTTP. The **reverse** transcriptase of Moloney murine leukemia virus and the DNA polymerase of E. coli were both more resistant to ddTTP, and the E. coli enzyme was significantly more resistant to AZTTP.

L7 ANSWER 18 OF 495 MEDLINE on STN
AN 95187914 MEDLINE
TI Functional analysis of the vpx, **vpr**, and **nef** genes of **simian immunodeficiency virus**.
SO JOURNAL OF ACQUIRED IMMUNE DEFICIENCY SYNDROMES AND HUMAN RETROVIROLOGY, **(1995 Apr 1)** 8 (4) 335-44.
Journal code: 9501482. ISSN: 1077-9450.
AU Park I W; Sodroski J
AB The role of the vpx, **vpr**, and **nef** genes in the replication of **simian immunodeficiency virus** (**SIV**) was investigated using point and **deletion mutations** in these genes. The effects on replication kinetics of single or combined mutants--vpx, **vpr**, vpx-**vpr**, vpx-**nef**, **vpr-nef**, and vpx-**vpr-nef**--in established lymphoid CEMx174 and MT-4 cells were negligible, except that the postinfection appearance of vpx-**nef**, **vpr-nef**, and vpx-**vpr-nef** progeny virus was slightly delayed in MT-4 cells. The vpx, but not the **vpr**, point **mutation** reverted to wild-type sequences within 12 days after infection, suggesting that stronger selection pressure for Vpx than for **Vpr** expression might exist in these established cell lines. In contrast to growth in the lymphoid cell lines, replication of vpx-**deleted** viruses in macaque peripheral blood mononuclear cells (PBMC) was severely impaired, indicating that Vpx is necessary for efficient replication in PBMC. In contrast, the **vpr** mutant exhibited different degrees of impairment depending on the donor animal used as a source of PBMC. A virus encoding a Vpx-**Vpr** fusion protein replicated in PBMC comparably to a **vpr deletion** mutant virus, whereas a frameshift **deletion** at the vpx-**vpr** junction of this mutant eliminated virus replication, suggesting that **deletion** of the C-terminal half of Vpx was partially compensated by the presence of the large **Vpr** portion in the fusion protein. **Deletion** of the **nef** gene did not affect SIVmac replication in PBMC. The Vpx and **Vpr** proteins expressed in COS-1 cells were detected in the extracellular medium and did not crossreact with **Vpr**- and Vpx-specific antisera, in spite of extensive amino acid similarity between these proteins. These studies indicate the importance of Vpx and **Vpr** in SIVmac infection and suggest that these proteins are antigenically and functionally distinct.

L7 ANSWER 9 OF 495 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1991:465694 CAPLUS
DN 115:65694
TI Generation of a chimeric human and **simian immunodeficiency virus** infectious to monkey peripheral blood mononuclear cells
SO Journal of Virology (**1991**), 65(7), 3514-20
CODEN: JOVIAM; ISSN: 0022-538X
AU Shibata, Riri; Kawamura, Meiko; Sakai, Hiroyuki; Hayami, Masanori; Ishimoto, Akinori; Adachi, Akio
AB Five chimeric clones between human immunodeficiency virus type 1 (HIV-1) and **simian immunodeficiency virus** (SIVMAC) and 4 SIVMAC mutants were constructed by recombinant DNA techniques. Three chimeric clones and all mutants with an alteration in either the vif, vpx, **vpr**, or **nef** gene were infectious to human CD4-pos. cell lines. The susceptibility of macaque monkey peripheral blood mononuclear cells (PBMC) to infection by these mutants and chimeras was examd. in vitro. Macaque PBMC supported the replication of wild-type and vpx, **vpr**, and **nef** mutant SIVMAC strains. A chimera carrying the long terminal repeats (LTRs), **gag**, pol, vif, and vpx of SIVMAC and **tat**, **rev**, vpu, and **env** of HIV-1 was also replication competent in PBMC. In contrast, HIV-1, the vif mutant of SIVMAC, a chimera contg. **rev** and **env** of SIVMAC, and a chimera contg. vpx, **vpr**, **tat**, **rev**, and **env** of SIVMAC did not grow in PBMC. Western immunoblotting anal. of the replicating chimera in PBMC confirmed the hybrid nature of the virus. These data strongly suggested that the sequence important for macaque cell tropism lies within the LTR, **gag**, pol, and (or) vif sequences of the SIVMAC genome.

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L7 ANSWER 1 OF 495 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1995:657583 CAPLUS
DN 123:65809
TI Gene **rev-mutated** human and **simian immunodeficiency viruses** and vaccines
SO PCT Int. Appl., 85 pp.
CODEN: PIXXD2
IN Krohn, Kai Juhani Ernst; Aavik, Einari
AB Novel human and **simian immunodeficiency viruses** (HIVs and **SIVs**, resp.) are provided having at least one **mutation** in the **rev** (the regulator of virion-protein expression) gene of HIV or **SIV** genome rendering them replication deficient for the **rev** gene, which can be trans-complemented. Further provided are methods for producing the **mutated** viruses, vaccines contg. the live, attenuated viruses, and methods of prevention and/or treatment of HIV and/or **SIV** infections or acquired immunodeficiency syndrome (AIDS) and related diseases in primates, including humans, by administering a vaccine contg. the **mutated** virus to afford protection against a virulent wild-type HIV and/or **SIV**. Thus, a live, attenuated vaccine is constructed comprising a HIV or **SIV** into which 2 or preferably 3 **mutations** were introduced into the part of the **rev** gene corresponding to the **rev**-responsive element binding region of the **REV** protein and /or optionally having a truncation of the C-terminal part of the **rev** gene after the RRE-binding region. The **mutations** replace arginine residues in the arginine-rich regions of the RRE-binding region of the **REV** protein with glycine, proline, or isoleucine. Ten novel PCR primers are presents for construction of the mutants by site-directed mutagenesis. As an example, SIVmac251 wild-type cloned proviral DNA pBK1 was engineered to prep. the **rev**-defective mutant pBK1M15. This clone is totally **rev** -deficient, but can be readily be trans-complemented with **REV** and REX; thus, a high amt. of an infectious virus can be obtained from MT-4 cultures infected with supernatant from HeLa rex transfections. The mutant pBK1M15 behaves as an ideal live attenuated vaccine in cynomolgus monkeys; it causes a transient infection which is abolished by the immune response raised in the vaccinated animal, and protects against wildtype **SIV** infection. A live attenuated HIV-1 vaccine defective for **rev** was also produced.

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9504546	A1	19950216	WO 1994-FI335	19940803 <--
W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LT, LU, LV, MD, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, TJ, TT, UA, US, UZ, VN				
RW: KE, MW, SD, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9472639	A1	19950228	AU 1994-72639	19940803 <--

(FILE 'HOME' ENTERED AT 11:47:10 ON 08 AUG 2003)

FILE 'MEDLINE, AGRICOLA, CANCERLIT, SCISEARCH, CAPLUS, MEDICONF' ENTERED AT 11:48:20 ON 08 AUG 2003

L1 12313 S SIV OR (SIMIAN IMMUNODEFICIENCY VIRUS)
L2 4405 S L1 AND (GAG OR DPOL OR ENV OR REV OR VPR OR TAT OR NEF)
L3 1425 S L2 AND (DELE? OR MUTAT? OR LACK?)
L4 652 DUP REM L3 (773 DUPLICATES REMOVED)
L5 2 S L4 AND PTV?

=> d an ti so au ab pi l5 1-2

L5 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2003 ACS on STN
AN 2001:224379 CAPLUS
DN 134:247955
TI Improved lentiviral vectors for packaging and transduction for long-term expression in dividing and non-dividing cells
SO U.S., 58 pp., Cont.-in-part of U.S. Ser. No. 848,760.
CODEN: USXXAM
IN Chang, Lung-ji
AB The present invention contemplates novel improved lentiviral vectors for the expression of genes at high levels in human and other cells. Vectors are provided which are packaged efficiently in packaging cells and cell lines to generate high titer recombinant virus stocks. The improved vectors contain novel packaging signals, an internal promoter, and a recombinant Rous sarcoma virus splicing signal. The viral gene expression vectors (pHP) were constructed to contain minimal amts. of HIV sequences, allowing efficient expression of viral structural proteins but not genome packaging. The transducing vectors (**pTV**) were constructed to contain all of the sequences to allow efficient genome packaging and internal promoter, but contain no viral genes and minimize the possibility of recombination with pHP. These two series of vectors demonstrated efficient gene transduction and high levels of long-term expression in many types dividing and non-dividing cells. The present invention further relates to HIV vaccines and compns. for gene therapy. In particular, the present invention provides attenuated replication-competent HIV vaccines and replication-defective HIV vectors.

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6207455	B1	20010327	US 1997-935312	19970922
US 6248721	B1	20010619	US 1997-848760	19970501
US 6531123	B1	20030311	US 1999-318138	19990525
WO 2000000600	A2	20000106	WO 1999-US11516	19990526
WO 2000000600	A3	20001012		

PI
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

L5 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2003 ACS on STN
AN 2000:15346 CAPLUS
DN 132:89228
TI Lentiviral vectors for packaging and transduction in gene therapy
SO PCT Int. Appl., 311 pp.
CODEN: PIXXD2
IN Chang, Lung-Ji
AB Packaging vectors comprising a nucleotide sequence encoding **Gag** and Pol proteins of a ref. lentivirus are provided. The packaging vectors differ from ref. lentiviruses at least in that: (a) its major splice donor site is either **deleted**, or if provided, while functional, differs in sequence from that of said ref. lentivirus sufficiently so that said major splice donor site is not a potential site for homologous recombination between said packaging vector and said ref. lentivirus; and (b) it **lacks** a functional major packaging signal. After introduction into a suitable host cell, the vector is capable of causing

such cell, either through expression from said vector alone, or through co-expression from said vector and a second vector providing for expression of a compatible envelope protein, to produce packaging vector particles comprising functional **Gag** and Pol proteins and having a normal or a pseudotyped envelope. The particles are free of the RNA form of said packaging vector as a result of (b) above, where said cell, as a result of said expression or co-expression, produces particles encapsulating the RNA form of a transducing vector possessing a compatible and functional packaging signal if said transducing vector is introduced into said cell. The transduction efficiency of the packaging/helper construct (pHP)/transducing vector construct (**pTV**) and a conventional murine leukemia virus vector was studied using different human cell types including TE671 (muscle), 293T (kidney), HepG2 (liver), neuronal stem cells and primary CD34 hematopoietic progenitor cells, and nonhuman primary rat neural and muscle cells. Transduction efficiency was assayed over short and long duration in tissue culture. The safety, expression kinetics, duration, and integration status of various lentiviral HP/TV vector systems are presented.

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000000600	A2	20000106	WO 1999-US11516	19990526
	WO 2000000600	A3	20001012		
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	US 6207455	B1	20010327	US 1997-935312	19970922
	CA 2333481	AA	20000106	CA 1999-2333481	19990526
	AU 9943126	A1	20000117	AU 1999-43126	19990526
	EP 1082447	A2	20010314	EP 1999-957641	19990526
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				

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ANSWER 3 OF 495 CAPLUS COPYRIGHT 2003 ACS on STN

AN 1999:728444 CAPLUS

DN 132:34656

TI Virus-specific cytotoxic T-lymphocyte responses select for amino-acid variation in **simian immunodeficiency virus** **Env** and **Nef**

SO Nature Medicine (New York) (**1999**), 5(11), 1270-1276
CODEN: NAMEFI; ISSN: 1078-8956

AU Evans, David T.; O'Connor, David H.; Jing, Peicheng; Dzuris, John L.; Sidney, John; Da Silva, Jack; Allen, Todd M.; Horton, Helen; Venham, John E.; Rudersdorf, Richard A.; Vogel, Thorsten; Pauza, C. David; Bontrop, Ronald E.; DeMars, Robert; Sette, Alessandro; Hughes, Austin L.; Watkins, David I.

AB Cytotoxic T-lymphocyte (CTL) responses to human immunodeficiency virus arise early after infection, but ultimately fail to prevent progression to AIDS. Human immunodeficiency virus may evade the CTL response by accumulating amino-acid replacements within CTL epitopes. We studied 10 CTL epitopes during the course of **simian immunodeficiency virus** disease progression in three related macaques. All 10 of these CTL epitopes accumulated amino-acid replacements and showed evidence of pos. selection by the time the macaques died. Many of the amino-acid replacements in these epitopes reduced or eliminated major histocompatibility complex class I binding and/or CTL recognition. These findings strongly support the CTL 'escape' hypothesis.

L18 ANSWER 7 OF 166 MEDLINE on STN
AN 1998406185 MEDLINE
TI **Env**-independent protection induced by live, attenuated **simian immunodeficiency virus vaccines**

SO JOURNAL OF VIROLOGY, **(1998 Oct)** 72 (10) 7846-51.
Journal code: 0113724. ISSN: 0022-538X.
AU Gundlach B R; Reiprich S; Sopper S; Means R E; Dittmer U; Matz-Rensing K; Stahl-Hennig C; Uberla K
AB Live attenuated **simian immunodeficiency viruses** (**SIV**), such as **nef deletion** mutants, are the most effective **vaccines** tested in the **SIV**-macaque model so far. To modulate the antiviral immune response induced by live attenuated **SIV vaccines**, we had previously infected rhesus monkeys with a **nef deletion** mutant of **SIV** expressing interleukin 2 (**SIV**-IL2) (B. R. Gundlach, H. Linhart, U. Dittmer, S. Sopper, S. Reiprich, D. Fuchs, B. Fleckenstein, G. Hunsmann, S. Stahl-Hennig, and K. Uberla, J. Virol. 71:2225-2232, 1997). In the present study, **SIV**-IL2-infected macaques and macaques infected with the **nef deletion** mutant SIVDeltaNU were challenged with pathogenic **SIV** 9 to 11 months postvaccination. In contrast to the results with naive control monkeys, no challenge virus could be isolated from the **SIV**-IL2- and SIVDeltaNU-infected macaques. However, challenge virus sequences could be detected by nested PCR in some of the **vaccinated** macaques. To determine the role of immune responses directed against **Env** of **SIV**, four **vaccinated** macaques were rechallenged with an **SIV**-murine leukemia virus (MLV) hybrid in which the **env** gene of **SIV** had been functionally replaced by the **env** gene of amphotropic MLV. All **vaccinated** macaques were protected from productive infection with the **SIV**-MLV hybrid in the absence of measurable neutralizing antibodies, while two naive control monkeys were readily infected. Since the **SIV**-MLV hybrid uses the MLV **Env** receptor Pit2 and not CD4 and a coreceptor for virus entry, chemokine inhibition and receptor interference phenomena were not involved in protection. These results indicate that the protective responses induced by live attenuated **SIV vaccines** can be independent of host immune reactions directed against **Env**.

L18 ANSWER 8 OF 166 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1992:606355 CAPLUS
DN 117:206355
TI Infectious non-pathogenic primate lentiviruses for use in **vaccines**
SO PCT Int. Appl., 50 pp.
CODEN: PIXXD2
IN Desrosiers, Ronald C.
AB Lentiviruses in which the **nef** gene is non-revertibly **mutated** to a null phenotype are prepd. for use in **vaccines**. The virus may also carry **mutations** in the NRE, **vpr**, vpx, or vpu sequences. **Deletions** in the **nef** gene of **simian immunodeficiency virus** SIVmac were prepd. by oligonucleotide-directed mutagenesis of cloned fragments. Similarly, secondary **deletions** in other genes were made.

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9200987	A1	19920123	WO 1991-US4884	19910710 <--
W: JP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE				
EP 491930	A1	19920701	EP 1991-913715	19910710 <--
EP 491930	B1	19970115		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
JP 05501654	T2	19930402	JP 1991-513074	19910710 <--
AT 147782	E	19970215	AT 1991-913715	19910710 <--

L18 ANSWER 9 OF 166 MEDLINE on STN
AN 97281569 MEDLINE
TI Live attenuated **SIV vaccines** are not effective in a postexposure **vaccination** model.
SO AIDS RESEARCH AND HUMAN RETROVIRUSES, **(1997 May 1)** 13 (7) 593-9.
Journal code: 8709376. ISSN: 0889-2229.
AU Linhart H; Gundlach B R; Sopper S; Dittmer U; Matz-Rensing K; Kuhn E M; Muller J; Hunsmann G; Stahl-Hennig C; Uberla K
AB Live attenuated **simian immunodeficiency virus** (**SIV**) **vaccines**, like **nef deletion** mutants, have been the most effective **vaccines** tested in the **SIV**/macaque model so far. The efficacy of live attenuated **SIV vaccines** in therapeutic **vaccination** and postexposure prophylaxis has not been determined. Inoculation of macaques with a pathogenic challenge virus and an attenuated **SIV vaccine** at the same time mimics postexposure **vaccination**, whereby **vaccination** with the attenuated virus is performed as rapidly as possible after exposure to pathogenic **SIV**. In the study presented here, four rhesus macaques were coinfected with pathogenic **SIV** and a nearly 3000-fold excess of a **nef deletion** mutant of **SIV**. Four macaques received pathogenic **SIV** and an approximately 200-fold excess of a **nef deletion** mutant expressing interleukin 2 (IL-2). The IL-2-expressing **SIV** had been previously constructed to enhance the immunogenicity of live attenuated **SIV vaccines**. All coinfected macaques had a high viral load, and some of them developed AIDS-like symptoms and pathological alterations rapidly. In the presence of pathogenic **SIV**, both live attenuated **SIV vaccines** did not protect from disease in this postexposure **vaccination** model.

L20 ANSWER 1 OF 13 MEDLINE on STN
AN 96211505 MEDLINE
TI **Vaccine** protection by a triple **deletion** mutant of **simian immunodeficiency virus**.
SO JOURNAL OF VIROLOGY, **(1996 Jun)** 70 (6) 3724-33.
Journal code: 0113724. ISSN: 0022-538X.
AU Wyand M S; Manson K H; Garcia-Moll M; Montefiori D; Desrosiers R C
AB Twelve rhesus monkeys were **vaccinated** with SIVmac316 delta **nef** (**lacking nef** sequences), and 12 were **vaccinated** with SIVmac239 delta3 (**lacking nef**, **vpr**, and upstream sequences in U3). SIVmac316 and SIVmac239 differ by only eight amino acids in the envelope; these changes render SIVmac316 highly competent for replication in macrophages. Seventeen of the animals developed persistent infections with the **vaccine** viruses. Seven of the 24 **vaccinated** animals, however, developed infections that were apparently transient in nature. Six of these seven yielded virus from peripheral blood when tested at weeks 2 and/or 3, three of the seven had transient antibody responses, but none of the seven had persisting antibody responses. The 24 monkeys were challenged in groups of four with 10 rhesus monkey infectious doses of wild-type, pathogenic SIVmac251 at weeks 8, 20, and 79 following receipt of **vaccine**. None of the seven with apparently transient infections with **vaccine** virus were protected upon subsequent challenge. Analysis of cell-associated viral loads, CD4+ cell counts, and viral gene sequences present in peripheral blood in the remainder of the monkeys following challenge allowed a number of conclusions. (i) There was a trend toward increased protection with length of time of **vaccination**. (ii) Solid **vaccine** protection was achieved by 79 weeks with the highly attenuated SIV239 delta3. (iii) Solid long-term protection was achieved in at least two animals in the absence of complete sterilizing immunity. (iv) Genetic backbone appeared to influence protective capacity; animals **vaccinated** with SIV239 delta3 were better protected than animals receiving SIV316 delta **nef**. This better protection correlated with increased levels of the replicating **vaccine** strain. (v) The titer of virus-neutralizing activity in serum on the day of challenge correlated with protection when measured against a primary stock of SIVmac251 but not when measured against a laboratory-passaged stock. The level of binding antibodies to whole virus by enzyme-linked immunosorbent assay also correlated with protection.

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TI Protection of macaques against a SHIV with a homologous HIV-1 **Env** and a pathogenic SHIV-89.6P with a heterologous **Env** by **vaccination** with multiple gene-**deleted** SHIVs.
SO VIROLOGY, **(1999 Dec 20)** 265 (2) 252-63.
Journal code: 0110674. ISSN: 0042-6822.
AU Ui M; Kuwata T; Igarashi T; Ibuki K; Miyazaki Y; Kozyrev I L; Enose Y; Shimada T; Uesaka H; Yamamoto H; Miura T; Hayami M
AB To evaluate the potential of SHIVs as anti-HIV-1 live **vaccines**, we constructed two gene-**deleted** SHIVs, designated SHIV-drn and SHIV-dxrn. The former **lacks vpr/nef** and the latter **lacks** vpx/**vpr/nef**. Four macaques that had been **vaccinated** with SHIV-drn were challenged with SHIV-NM-3rN, which has an HIV-1 **Env** that is the same as that of SHIV-drn. No challenge virus was detected by DNA PCR in, or recovered from, two of the macaques. In the other two, challenge virus was detected once and twice, respectively. Plasma viral loads were much lower than those in unvaccinated controls. Another four macaques were **vaccinated** with SHIV-dxrn. These macaques showed resistance but less than that of SHIV-drn-**vaccinated** macaques. When the two SHIV-drn-**vaccinated** macaques were challenged with pathogenic SHIV-89.6P, which has an HIV-1 **Env** that is antigenically different from that of SHIV-drn, replication of the challenge virus was restricted, and the usual decrease in the number of CD4(+) cells was prevented. In this protection, it is noteworthy that protection involved not only neutralizing antibodies and killer cell activity, but also other unknown specific and nonspecific immunity elicited by the infection.